CLAIMS

What is claimed is:

1. A fusible print medium, comprising:

a photobase layer;

a vehicle sink layer; and

a colorant-receiving layer configured to have a phase inversion that encapsulates a colorant in the colorant-receiving layer, wherein the colorant-receiving layer comprises core-shell polymer particles having a hydrophilic shell and a fusible hydrophobic core.

2. The fusible print medium of claim 1, wherein the colorant-receiving layer is configured to invert from a porous, hydrophilic surface to a continuous layer having a hydrophobic surface.

3. The fusible print medium of claim 2, wherein the colorant-receiving layer is configured to invert from a porous, hydrophilic surface to a continuous layer having a hydrophobic surface upon exposure to heat, pressure, or combinations thereof.

4. The fusible print medium of claim 2, wherein the colorant-receiving layer is configured to invert from a porous, hydrophilic surface to a continuous layer having a hydrophobic surface upon exposure to a temperature greater than a glass transition temperature of the fusible hydrophobic core.

5. The fusible print medium of claim 1, wherein the colorant is encapsulated in hydrophilic domains in the colorant-receiving layer by the phase inversion.

6. The fusible print medium of claim 1, wherein the hydrophilic shell comprises a latex vinyl polymer and the fusible hydrophobic core is selected

from the group consisting of a copolymer of acrylate and methacrylate, a styrene-acrylic polymer, a vinyl acetate-acrylic, a vinyl acetate-ethylene, and a copolymer of acrylonitrile.

7. The fusible print medium of claim 1, wherein the hydrophilic shell provides mordant properties to the colorant-receiving layer.

8. The fusible print medium of claim 1, further comprising a topcoat layer.

9. A method of printing a photographic quality image, comprising:

providing a fusible print medium comprising a photobase layer, a vehicle sink layer, and a colorant-receiving layer, the colorant-receiving layer having a porous, hydrophilic surface and comprising core-shell polymer particles having a hydrophilic shell and a fusible hydrophobic core;

depositing inkjet ink onto the fusible print medium to print a desired image; and

fusing the colorant-receiving layer into a continuous, hydrophobic film.

10. The method of claim 9, wherein fusing the colorant-receiving layer into a continuous, hydrophobic film comprises exposing the fusible print medium to heat, pressure, or combinations thereof.

11. The method of claim 10, wherein exposing the fusible print medium to heat, pressure, or combinations thereof comprises exposing the fusible print medium to a temperature greater than a glass transition temperature of the fusible hydrophobic core.

12. The method of claim 9, wherein exposing the fusible print medium to heat, pressure, or combinations thereof comprises exposing the fusible print medium to a heat source selected from the group consisting of a drying oven, an infrared oven, a heat lamp, an infrared lamp, a hot press, a laminator, and an iron.

13. The method of claim 9, wherein fusing the colorant-receiving layer into a continuous, hydrophobic film comprises encapsulating a colorant from the inkjet ink in hydrophilic domains in the colorant-receiving layer.

14. The method of claim 9, wherein fusing the colorant-receiving layer into a continuous, hydrophobic film comprises contacting the fusible hydrophobic core with a coalescing agent.

15. The method of claim 14, wherein contacting the fusible hydrophobic core with a coalescing agent comprises incorporating the coalescing agent into the inkjet ink.

16. The method of claim 14, wherein contacting the fusible hydrophobic core with a coalescing agent comprises contacting the fusible hydrophobic core with a coalescing agent selected from the group consisting of 2,2,4-trimethyl-1,3-pentanediol monoisobutyrate, ethylene glycol monobutyl ether, diethylene glycol monobutyl ether, diethylene glycol monomethyl ether, propylene glycol monomethyl ether, and dipropylene glycol monomethyl ether.

17. A method of producing a fusible print medium, comprising:

forming a vehicle sink layer on a photobase layer; and

forming a colorant-receiving layer on the vehicle sink layer, the colorant-receiving layer comprising core-shell polymer particles having a hydrophilic shell and a fusible hydrophobic core, wherein the colorant-receiving layer is configured to invert from a porous, hydrophilic surface to a continuous layer having a hydrophobic surface.

18. The method of claim 17, wherein forming a colorant-receiving layer comprising core-shell polymer particles comprises forming the colorant-receiving layer from a hydrophilic shell that comprises a latex vinyl polymer and a fusible hydrophobic core that is selected from the group consisting of a

copolymer of acrylate and methacrylate, a styrene-acrylic polymer, a vinyl acetate-acrylic, a vinyl acetate-ethylene, and a copolymer of acrylonitrile.

19. The method of claim 17, further comprising forming a topcoat layer on the colorant-receiving layer.